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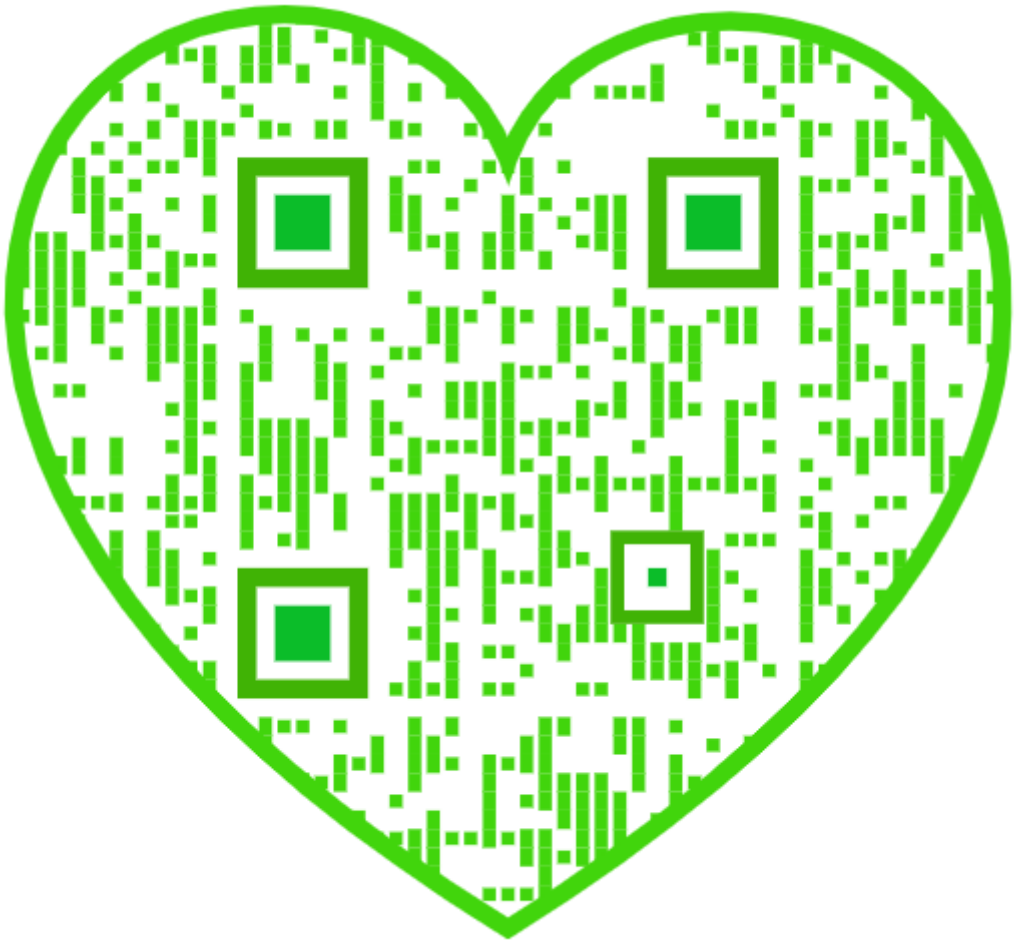

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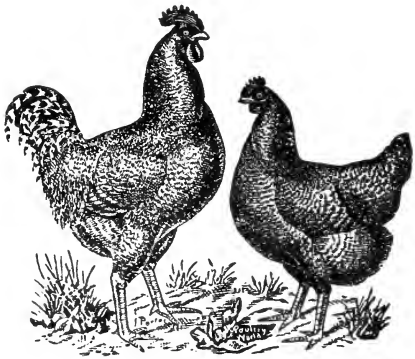
THE PLYMOUTH ROCKS.

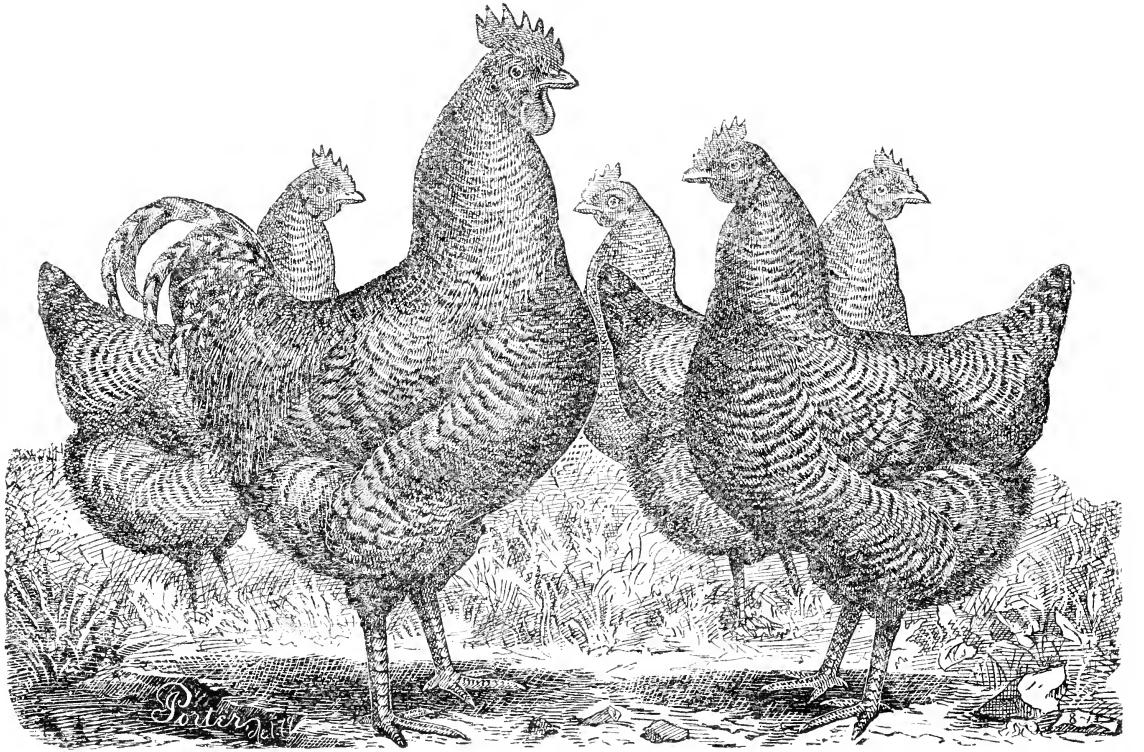


How to Mate, Rear and Judge Them.

By H. H. STODDARD,

Editor of "The Poultry World," and "American Poultry Yard,"
Author of "An Egg Farm," "Poultry Architecture," "How to Win Poultry Prizes," "Poultry Diseases," "White Leghorns," "Brown Leghorns," Etc.

HARTFORD, CONN.
1880.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THE

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PREFACE.

No breed of fowls have attracted more attention or gained more popularity on account of their sterling qualities than the Plymouth Rocks have during the past few years. The peculiar make-up of these fowls has given to them a certain hardiness which fits them for the farm and recommends them to the ordinary poultry keeper.

Thousands are now striving to improve this comparatively new breed. The faults as well as the fine points should be well understood. Fanciers have been engaged disseminating Plymouth Rocks, supplying the demand. The call now is for *Standard birds*, not for those with dark beaks and legs and indistinctly-marked plumage.

During the next ten years there ought to be a weeding out of the minor faults which are apparent even in the best strains. Very superior specimens will be in demand, and he who can produce Plymouth Rocks with the best symmetry and color of plumage, legs, beaks and ear-lobes, and well-shaped combs, will reap his reward. This book is intended to help on the good cause.

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THE PLYMOUTH ROCKS.

WHAT the Plymouth Rock of to-day should be, almost every fancier thinks he knows. That the type held in the mind's eye of each separate fancier is not a universally accepted one is of little moment, it is sufficiently near the same thing in all cases to show that the breed is no longer a thing to be, but an accomplished entity.

Years of breeding will, of course, draw the threads which weave the traits of forgotten ancestral stock to a more perfect web, and we shall have a fowl as perfect in its reproduction as any of the longest-cultivated varieties of to-day; but probably no period of equal length will show such improvement as the five years preceeding 1880. Truly there must have been good material at hand to make a cross that in such a short time could be brought to such a nobly prominent position as the Plymouth Rock holds to-day. Let us see what were the influences of blood and breeding that were at work.

DOMINIQUE AND JAVA.

It is now universally admitted that the Plymouth Rock is the resultant of the process of breeding the old-fashioned Dominique — the native American fowl — on Black Java hens, a sort now nearly or quite unknown in this country; but who originated this cross is a matter of dispute which will probably always remain in *statu quo.* It is enough for the breeder to know that the union of the hawk-color and the black was effected, and few will care for purposeless search beyond Drake or Ramsdell or Upham. We are all looking forward and not backward, and were the entire past of this breed—save the knowledge of what the cross was—blotted out, breeders would be no way troubled to manage their stock as successfully as ever. Still, the history of the breed contains much of interest, and we will give briefly the history of Plymouth Rocks—ancient and modern—before going into the discussion of questions more immediately affecting their treatment in the present.

OLD LINE ROCKS.

Of the varied elements which went to the making of the Plymouth Rocks of 1849 there is little doubt, for we have the record of their original breeder, Dr. J. C. Bennett, as an authority. From this it appears that the male progenitor was a Cochin China cock, and the hen a cross of three distinct breeds—Great Malay, Fawn-colored Dorking and the Wild India fowl. All of the three latter were well known and commonly bred at the time

when this cross was made, but have since been supplanted by improved varieties.

The Great Malay was of Asiatic blood and was always exhibited in that class at the poultry shows, but, except as a new wonder in the class which then was such a source of astonishment to all beholders, had little merit.

The Fawn-colored Dorking was, as its name implies, a Dorking, neither more nor less, and very much such a bird as is now bred under the name of Colored Dorking, presumably. Of the Wild India fowl we know little. Its influence on the original Plymouth Rock was, of course, small and had no great or perceptible influence on the bird.

In shape, the Old Line Rocks were rather triangular—a probable souvenir of the Cochin blood—with a slight leaning toward the squareness of the Dorking, from whom they inherited also a frequent fifth toe. From the Cochin they took leg-feathering, and from the mixed blood of the several parent stocks, plumage of diverse colors laid on in a helter skelter manner that was unique but hardly æsthetically correct.

Spite of all these defects of one sort and another the breed was well liked and had many adherents. It is very likely that while the admixture of so many uncultivated and strong bloods brought out a mixed and unsightly coat, they induced also an extraordinary amount of hardiness and fertility, but the record of the breed is so scanty that we have scarcely enough data to assure us that such was the case.

However that may be; whatever their excellences, the

incipient breed ran out completely, or ran in to anything and everything by admixture with diverse breeds, and for years no Plymouth Rocks existed. Then came another fowl of entirely new blood and finding the name ready-made but the fowls it used to represent extinct, accepted it as the title best suited to its solid merits. At this point the Old Line Rocks disappear: henceforth the title Plymouth Rock means the fowl of to-day.

ADVANTAGES OF PEDIGREE.

We need hardly, at this late day, when so many thousand choice fowls have been registered in the *American Poultry Pedigree Book*, point out the desirability of keeping an exact record of the lineage of our stock. In all varieties of cleanly-bred fowls some such register is of the utmost value. Not only does it give us easily accessible data concerning our own stock, but it enables us to buy a more perfectly-defined bird than we could, in all probability, otherwise obtain. When selling stock we can always command better prices for a bird whose genealogy we are not afraid to publish openly to the world than for another equally good, to all appearance, which is a solitary specimen and of unknown extraction.

There is good reason for this in the fact that a bird by all the ordinary tests may rank high and yet be simply a mongrel, the "come-by-chance" offspring of different breeds or even of mongrel stock.

This last is particularly liable to be the case with the Plymouth Rock, which, in plumage is somewhat like the hawk colored dunghill bird once so common and even

now often seen in a yard where common stock is accustomed to run with a lusty Plymouth Rock male. All who have bred the variety which is the subject of this monograph know from practical experience, that in breeding from even the best strains we obtain many imperfect chickens, which, if allowed to grow to maturity become imperfect fowls. In point of fact such birds are often reared and kept for sitters. Now, if these imperfect birds are bred to standard specimens, although the general result is poor, a few choice cockerels or pullets may be obtained.

We have then stock that will sell readily on its appearance, yet is subject to a constant uncertainty on the score of reproduction. It is precisely here that the *Pedigree Book* tells the story, for as we trace the line backward we come to a gap where the blood of the imperfect and unregistered sire or dam was introduced.

Let no one for a moment suppose that we advocate the theory than an un-pedigreed fowl *may* not be as true and pure as any other. Of course, good birds may be reared in quantity and never registered, and plainly their registration can make no point a whit better, but how can we show to those who are looking for choice birds, that we have what they are seeking. It is well enough to write to the enquirer that the fowls are from superior stock, and that the line can be traced back through many a fine sire and dam, but it hardly answers the purpose of one who wishes to get fresh blood as nearly identical in general character with his own, as possible.

Pedigree registration is a sort of commercial agency,

which saves tedious processes of inquiry for each patron, and enables him, by the payment of a small sum, to get information that were he alone to endeavor to collect it would cost thousands of dollars.

BREEDING LARGE NUMBERS.

Beginning with strictly pure and finely marked breeding stock we may yet in the course of a very few seasons go from bad to worse so rapidly as to have, ere our flock is in its fourth year, little better than dunghill stock. To avoid this fate we must have recourse to the plan indicated by our title in this chapter and breed large numbers of chicks yearly. There is a constant shrinkage in our number of young birds from the time they chip the shell till they are fully grown, no matter how carefully we may meet their needs as far as we know them.

In estimating, then, the number of eggs that must be set and the chicks we expect to hatch out we must allow a liberal possible percentage of loss, so that after deducting for every cause we may still rear a large number of fowls to the age where we can readily tell which are worth preserving. At this point comes in another, and with this breed quite appreciable, item of subtraction. It is but fair to say that if we start with twenty chicks not more than fifteen will live to the age of broilers, and of these not more than ten or eleven be worth saving until riper age shows their value more clearly. Of this number, not more than three or four will be first class, and the other six or seven "fair to middling." This supposition is, of course, not in accordance with

the experience of all breeders, but it may represent a fair average sample merit and is sufficiently accurate to answer the purpose of the illustration.

It is self evident that the breeder who has but three or four good birds to show for his season's breeding is in no position to sell any stock, for a single trio would exhaust his resources and leave him plus some cash, two cockerels and his old stock. Neither has he enough fowls to continue the business on an increased scale the next season. To all intents and purposes he has lost a year.

To prevent such a misfortune there is but one resource; we must breed large numbers. If, instead of twenty the breeder starts two hundred chicks and with good management rears thirty or forty number one cockerels and pullets, he has reason to be very well satisfied with his work. With such a number he can sell stock enough to repay the season's outlay, give him a profit, and leave plenty of lusty young stock for the coming breeding season.

The reasons we have already given for rearing large numbers hardly need anything to supplement their force, yet the point which most nearly affects the fancier is to come. Every breeder is called upon during the show season to furnish exhibition fowls properly matched for show purposes, and if he has plenty of stock to select from, can fill such orders at a good profit in both reputation and coin. To make the best choice of a prize trio, the breeder must have the requisite amount of material. Could a skilled Plymouth Rock breeder have a

lot of one thousand fowls from which to pick prize winners, there can be no doubt that he would get far better results than if he had ten separate flocks of one hundred each with no power to match birds from one flock with those from another. As the number from which choice is to be made decreases the excellence of the matchings must be rapidly lost until we reach the point where but one trio is available and no choice remains.

To sum up this whole question briefly, we may say that breeding large numbers is the greatest secret in poultry breeding yet discovered. It may not be easy to breed large numbers the first year, but after the attendant machinery is well set in motion we can easily keep it going smoothly. We can hardly give a better or more pithy dictum for the consideration of ponltrymen generally than that contained in the three words, "breed large numbers." But do not crowd many in one flock or one place.

THE BREEDING COCK.

In breeding poultry of any variety it is of absolute importance that the male bird be virile to the highest possible point. His power of procreation should be one of his chief merits. No matter how cleanly marked his plumage may be if he is sluggish in his motions and pays little attention to his flock, he isn't worth a picayune for breeding purposes. "Off with his head."

Hens will lay as well or even better when not associated with a cock, and if we cannot have a crower that will thoroughly fertilize the eggs, we might better save

the time of the sitting hens and our own annoyance, by using the eggs for culinary purposes.

In this connection we may very properly note the fact, that a male bird kept stived up in confined quarters will lose his virility to an extent that few breeders who have not watched the effect of such treatment will credit. Even if he comes of a long line of fowls noted for their prepotency, his prestige as a stock-getter cannot overcome the withering influence of close confinement.

When, as is sometimes the case, a run large enough to give all the fowls the privilege of *ample* range cannot be had, it will be found a good plan to keep the cock apart from the hens until the breeding season arrives and then divide the hens into two small flocks with which the male is placed on alternate days. Under such a system better results have been obtained, in a majority of cases, than by the common method.

The male has a share in determining the size, shape and plumage of many more chicks than has any one of the hens, and hence is more necessarily the very best bird attainable than any one of the hens he consorts with. His influence extends to *all* the chicks while that of each hen affects only a small percentage.

The perfect cock of a Plymouth Rock breeding pen should be full standard weight, but little over it. He should be "built from the ground up" with unmistakable solidity but no clumsiness. The toes strong and clean cut, not running to the nail as thick as at their junction but tapering, above the foot a clean solid leg of a rich

golden color undimmed by parasitic blotches, and resting on this the solid clear-barred body.

We need hardly describe the carriage of an active crower of this breed for the image that rises in the mind of every fancier is nearly the same. Solidity is its most apparent characteristic; while the sober gray of the plumage is offset and enlivened by the clear red of comb and wattles and the brightness of the eye.

The Plymouth Rock is a *satisfying* bird in almost every sense. Look at a flock of these birds at a distance and you can scarce distinguish the males, at first sight, but examine closer and the eye soon learns that the first-class Plymouth Rock male is as truly in all points the head of the house as in the case of his more gaudily plumed brethren, the Games or Hamburgs. Give us good males and the task of producing noble specimens is a comparatively easy one.

Farther on we shall speak of the comparative merits of light and dark cocks, and just here merely remark that whether light or dark see to it that the markings are clearly defined. The bars should be clean cut and distinct in every part of the plumage up to the eyes and down to the bottom of the thighs.

Aside from plumage, the symmetry, breast and body are very properly made prominent in the *Standard of Excellence*. A full round breast is of the utmost importance and no solicitude in regard to color of plumage, ear lobes and leg, or shape of comb should lead us to overlook the advantages of that robustness and rotundity that give the progeny vigor, size, and a fine carriage.

Symmetry is the proportion which the parts bear to each other. A coat may be well enough on one man but out of all proportion on another, and so a comb or neck or tail that is well enough in itself and enhances symmetry on one bird, would have a contrary effect on another, because not harmonising properly with the other members.

Every year people are learning the distinctive shape of Plymouth Rocks The chromos and engravings made to represent specimens help to fix true ideas of their shape or proper symmetry. It is not easy to write a description of the symmetry of this breed. One can better learn this at exhibitions, where the best specimens may be seen. It would be very bad policy to breed from a cock having a very long neck and short legs, or having legs very long and standing near together. The comb is very liable to be crooked, carried too far back, pimply, or irregular in its serrations. A small comb, thick at the base, is apt to be free from faults, while a large comb is generally uneven, lopped, or has kinks and sprigs. These sprigs are only the reversion toward the rose-comb of the Dominique ancestry. The comb is the hardest thing to get right on any breed of fowls. Large wattles generally indicate potent breeding properties, unless the bird is coarse, leggy and overgrown.

THE BREEDING HEN.

Ever since Eve was created, the female has been of the lesser public importance in uncivilized life. (That women rule the men of this century has nothing to do

with the matter.) Feathered stock furnishes no exception to this rule, yet good hens are as absolutely necessary to careful breeding for nice points as good males.

As with the other sex the great desiderata are Standard weight, harmonious outline and clean markings. Due regard to these fundamental requirements will cause many promising chickens to see the light and give us, if we have obtained a male such as we have described, a number of first-class birds. Still, in selecting hens for breeding there is one thing more to be done if we would have the most satisfactory flock; and that is getting hens and pullets that are matched in degree of color as well as in other points.

Nothing will sooner disgust visiting fanciers than a lot of fowls, all Plymouth Rocks, to be sure, but scarce any two fairly even in point of color; while no one excellence will insure more sales than uniformity. Like produces like in this matter very nearly, and we can by a little thoughtful work at mating time help materially the progress toward uniform coloring, we are all aiming to push to the point where progression stops and perfection is attained.

MATING.

Shall one mating be made for the purpose of producing well-colored males, and another to produce females, or shall the fancier mate one way for the production of both sexes? Shall the practice be followed of mating light birds of one sex with dark ones of another, or is it better to select nothing for breeding stock excepting

medium-colored birds of both sexes, of the same shade of color like those preferably exhibited together? These questions are continually agitated among Plymouth Rock men.

The reply is, that while very light and very dark birds should never be used as breeders at all, yet in the present state of the breed, moderately light may be mated with moderately dark ones, or medium (neither light nor dark), may be mated to medium. Also, different combinations may advantageously be made according as our object may be to get pullets or cockerels. That the breed will ever arrive at that stage where the males will be naturally produced as dark as the females we very much doubt, and till that time arrives we must make the best of things as we find them, and at the same time, try to bring about that state of things as well as we know how.

At present, and ever since the breed was known the males have "run light" and the hens dark. That is, in every yard of Plymouth Rocks the fowls are found varying in color, both cocks and hens. Among the former a very few are what would be called dark, a considerable number medium, and a large number light, or very light, so that they may be called light as a rule. The hens are in greatly preponderating numbers, very dark, a few lighter and a *very* few what may be called light, or about the same shade as a dark medium cockerel.

These light pullets and dark medium cockerels match in the pen, and from them are selected the exhibition birds. They are desirable, but few; being few they are

in great demand. Breeders wish to mate their stock in such manner as to produce the greatest number of these light-colored pullets. Every year in which the lightest colored pullets are used successively tends to *fix* a lighter shade on the female side. The light-colored cockerel and the black hen draw in opposite directions. Can the Plymouth Rocks be so changed by breeding as to approximate, and finally draw together? Perhaps so and perhaps not. It can only be accomplished, if at all, by patience and effort in the right direction. It never will be done by persistently using a light cock.

The change must be gradual. It will be advisable for the breeder to make three matings. In the first place, all the lightest cockerels and all the darkest pullets should be rejected as unfit to breed. Then much attention should be given to the color of the legs. It is very important that a breeding cockerel should have not only legs yellow, but *very* yellow legs. The pullets at first can not be found in considerable numbers with pure yellow legs, but after culling out all that show glaring imperfections, and those very light or very dark, take of the remainder those pullets that are the darkest and mate them with one of the lightest cockerels not near akin. This mating will not produce exhibition cockerels, and the majority of the pullets will be about the color of the dam—the lightest will be useful.

Then take those pullets a few shades lighter than those of the first mating and mate them with a medium colored cockerel. This mating will produce a good per cent. of standard chicks, more especially cockerels.

Lastly, place the lightest-colored pullets with a dark medium cockerel. In this mating the sexes are nearly of one color. Every breeder should make such a mating as this every year. We have conversed with many breeders who have made this practice without getting black chicks, but just so sure as the thing is overdone and you use *too* dark a cock in the breeding pen you will have a lot of pullets as black as crows, with green-black legs. The whole season's produce may be easily ruined in this way. The matter of extreme colors should be discontinued entirely as soon as may be, and the breeder should have in view the bringing about of a unniformity of color in the sexes.

Yet it may be doubted whether we ever can produce Plymouth Rocks that shall tend invariably, to produce males as dark as the females, and females as light as the males. The old Black Java hen has been made too much of a scape-goat. There are, no doubt, instances in the animal kingdom where traits originally introduced through one sex tend to persist in that sex alone. But experiments in mating a Black Cochin Cock to an average American Dominique hen and rearing the products of the cross for three generations have proved that the *dark* pigment still appeared chiefly in the pullets rather than in the cockerels. This might have been expected in advance, because analogy teaches it. Nearly all our breeds whose plumage contains both light and dark feathers, or markings, naturally throw males whose color wil *average* lighter than that of the females. The hackle and saddle of the cock inclines to be lighter than

the corresponding portions of the hen and certain portions of his tail and wings contain relatively larger patches of white, which make his average color lighter than hers. For example S. P. Hamburgs, S. S. Hamburgs and Colored Dorkings.

Again, the Black Java cocks, like the Black Cochin males, tend towards light or golden saddles and hackles and the American Dominique males have the same tendency. Now as the Black Java and American Dominique males are both lighter than the respective females and as the Plymouth Rocks are based on these two breeds, will the time *ever* come when our Plymouth Rocks will average of the same color in both sexes?

PLYMOUTH ROCK CHICKS.

We need hardly go over the ground we have carefully examined in our previous books, and take those who would learn the best methods from raising chicks from the egg to maturity through the whole curriculum, for it may be found in our earlier works. There are, however, some points particularly worth notice in relation to the chicks of this breed that may well receive a moment's attention.

Of the care during the first few days after hatching, little need be said in the present treatise. At the expiration of that time, if any signs of unusual mortality show themselves it is worth while to institute a rigid search for the cause, for there always is a cause for these things. If the breeding stock and the eggs were favorable, and the management is right, chickens ought

not to die. Poultrymen ought not to expect, as a matter of course, mortality among their broods of any noticeable amount.

If parasitic vermin are making ravages, go for them with Carbolic Powder or Persian Insect Powder. If corn-meal dough has been the diet, and we are assured that it has not been given in too wet a state, and yet scours are noticed, a change from that to clabbered milk may be found a sovereign remedy. Should milk be not easily accessible, a few grains of red pepper or a little of the powder of the German Roup Pills, one sixth as much per head per day as is prescribed for adult fowls in the directions, will be found very efficacious. If on the other hand constipation becomes general, as it sometimes does, a diet of shorts or shorts and corn-meal, wet to a crumbly consistence, frequently removes the trouble.

At the age when broilers are beginning to be thought of, and the breeder's eye runs over his flock to cull out the least promising, the greatest care must be used in selection. We cannot now as we could but a few years ago, take all the black and leave all the gray ones, for blacks are few and far between nowadays, if the method of mating has been "half-way decent." We must use close inspection and the knowledge which past years have given us of the various changes which occur during the development of growing birds, to pick out the right ones. Many a chick that the uninitiated eye would call worthless will at maturity, when the brownish gray has given place to clear bars, be very good, while better marked birds have developed into disqualified specimens.

In making choice of birds for the table, fanciers often overlook one or two points that may serve as reliable guides. One of these is the breast-bone. How many breeders in selecting culls at this age look for a crooked breast-bone? Yet this is a serious blemish, and should summarily condemn any chick possessing it. In every flock there are more or less chicks thus deformed, and if we make these our first choice for the slaughter, we may well let others, with no irremediable failing, live a little longer.

Another thing to be looked after is the "pope's nose," which will determine the carriage of the tail and the value of the bird. If this is very evidently awry we need look for no other defects but condemn the fowl to the block. Weed out all the chicks with crooked bones anywhere, and the rest of the flock may well be granted a little longer lease of life.

The sex of the young stock, though it is not so readily ascertained as in other breeds, may be borne in mind in culling. A hen is a hen just as an egg is an egg, and though a poor Plymouth Rock cockerel is not worth his salt except for market, an inferior hen may be valuable as a sitter, if you have an out-of-the-way yard to keep such eyesores in. Even among the males we may make a distinction, using the very light ones and those with white wing or tail feathers for the table, before deciding upon the merits of the darker specimens. We might go on and give in their order the reasons which lead the careful breeder to a judicious choice in this all-important matter, but need hardly do so, for we

have said enough to show the possibilities of the subject and lead to the best of all knowledge, that acquired through the results of accurately-noted experiments.

In weeding out culls of this breed you must be very cautious and not condemn an immature bird too hastily on the ground of off-color in either plumage; legs or beak. The color of the feathers changes a great deal in the course of the growth of the young bird, so that specimens apparently the best turn out the worst oftentimes, and *vice versa.* As regards beak and legs, many a time the obnoxious willow or dusky tinge hangs on obstinately for months and then suddenly begins to disappear with great rapidity. Now that the popular methods of marking birds by means of punches and rings are in vogue, it will repay the careful breeder to set down in a book a description of doubtful birds at successive stages of their growth, and in this way learn by experience what changes to expect while specimens of certain characteristics are maturing. Refer to this book the next year, and in time you will learn which faults are commonly outgrown and which are irremediable.

SPORTS AMONG THE ROCKS.

Plymouth Rock fowls rarely throw what are known as "sports." Still such occurrences as the production of white chicks are sometimes heard of. It may be of interest to note the experience of a breeder as given in the *American Poultry Yard*, who says:

"I have in my possession a white Plymouth Rock chick, hatched the 15th of May. The eggs I set from

my own yard; there have been no other hens and no other cock in the yard but Plymouth Rocks. The chick is about as white as a White Leghorn, but the shape is the same as the rest of the Plymouth Rocks that were hatched out in the same nest. The cockerel from which the chick was bred is a fine one. If any one can tell where and how the chick became white, I would like to hear from him; for what I say in regard to it I know is true. Is this a sport?"

To this last query we are inclined to return a decided affirmative. Albino fowls are rarer than coal-black ones in all breeds, as far as our experience goes, but are by no means very uncommon. A black fowl of this breed, though it may be called a case of reversion, cannot properly be called a sport. It is rather a fowl that "throws back" to a distant ancestor. The time when every year brought a number of pure black pullets is too fresh in the breeders mind to allow such a term to be applied to it at present. Ten, or perhaps five years hence, the epithet may become current, but hardly before that time.

Sports occur in every breed even under the best management, and, we make no doubt, are as plenty in the Plymouth Rock tribe as in any other. The time may come when all breeds of fowls known to the *Standard* will be so perfect as to throw no sports, but when that happens the millenium will begin to loom like a ship in a fog. In fact, domestic fowls ought not to be expected to ever breed perfectly true to color. Wild species breed with great uniformity in this respect generally.

But the influences of domestication tend to break up and scatter the color in numerous directions.

COMBS.

This breed of fowls is generally acknowledged to be one of the most hardy and vigorous of all our domestic breeds, and is well fitted to stand the rigor of northern winters, if we except the single comb. In selecting breeding stock, both cocks and hens, it is advisable to use those, other points being equal, having rather small combs, well set on the head, not thin or inclined to lop. A small, thick, single comb will stand cold much better than one of the Leghorn style. The *Standard* requires a comb "rather small."

The experiment of attaching a pea-comb instead of a single one has been, we believe, tried in several instances with more or less success, and quite recently a breeder advertised Pea-combed Plymouth Rocks under the title of "re-improved." We have been unable, however, to obtain any reply to our inquiries as to how the pea-comb was obtained, and whether it is firmly fixed as a characteristic.

Whatever the success or failure of the experiment in this particular case, the desirability of a race of Pea-combed Plymouth Rocks is so evident that we may expect, in a very few years, a number of strains of the variety.

THE STANDARD AND THE ROCKS.

Hardly any breeders can be found who see in the autocratic pages of the *Standard of Excellence* just the

definitions they would place there. Yet this manual is so immensely superior to anything we have ever had before, that we may well be thankful for it, and find no fault with its matter relative to most breeds. For the Plymouth Rocks, however, we may claim an exceptional case, and a consquent exemption from the rule of—no grumbling.

This state of the case is due, primarily, to the fact that while our Games, Leghorns and Brahmas were well reduced by the harmonizing influence of years of breeding to an easily obtained general type, the Plymouth Rocks were in their first stages of development. In 1869, be it remembered, the first Plymouth Rocks were exhibited, the old line Rocks of course excepted, and but a very few years later their popularity made some standard necessary. Different breeders were doing their utmost to improve the breed, but their lack of unity made their progress toward their end something like the efforts of the workmen of the tower of Babel. So a *Standard* was made, though no one considered it as a perfect work or the exponent of the perfect fowl all were working for. From time to time slight changes were made as there was necessity for them, but much is yet to be desired.

Mating is the vexed point with the fancier, for months at a time, but we have a rule which is founded in experience and builds itself cumulatively from year to year. For matching, however, we must rely on the *Standard*, by which official ratings are determined, and here we find a discrepancy which surely ought not to go unquestioned. According to the practice and belief of the most expe-

rienced breeders, fowls matching in the show-pen must not only match as the *Standard* says they should, *i. e.*, in being equally well barred in plumage, but also must be, as nearly as possible, of the same degree of color. So universal is this belief, although the *Standard* nowhere so dictates, judges give precedence to the pair nearest the same shade of color over others as good, perhaps, in everything else.

It is easy to see that if the *Standard* is fully and completely right, judges and exhibitors are working a blind lead. This is one of those cases where no rigid rule can stand the weight of the common-sense opinion of the majority. If the mountain will not come to Mahomet, the latter must move to the more powerful body. The *Standard* is no idol which can have a Juggernautic power, but simply the exponent of the best opinion. When it ceases to be this a change must come.

Still we must make haste slowly and be sure we are on the right track before we step ahead. As regards the desirability of a clause in the *Standard* specifying that to be matched in color in the show-pen if is not necessary that the male should be as dark as the female, or stating that it is admissible that in a pair the specimen of one sex may be lighter than the other—if the majority of breeders favor such an amendment, we should join them most heartily, for, as we have said elsewhere in effect, we do not believe that nature intends the male of this breed to be dressed in as dark feathers as is the female.

In making the shape which one breeder has so loudly

advocated as the standard one, we may run directly counter to the views of many who have as good a right to their voice in the matter as any one. If we advocate a lowering of the prescribed weights, and an avoidance of all tendency to imitation of the Asiatics, we run full against a large faction. In short, the obstacles to hasty changes are many, and we can only hope for sure progress by "making haste slowly," and only making additions to our code as their necessity and feasibility are shown by full discussion.

EXERCISE.

There is enough blood of the lazy Asiatic poultry in the Rocks to make considerable tendency toward the development of internal fat and fatty degeneracy of constitution, hence the importance of securing exercise. As flight is forbidden to them, and limited ranges preclude roaming and the consequent exercise, our domestic fowls have, of necessity, to be provided for in some other way.

When they are confined within narrow limits, and have no room or chance to exercise themselves, they should be provided with the means of scratching. To do this advantageously, bury your grain beneath some dry rubbish, coal ashes leaves, road dust or chaff, so that they will be compelled to use their feet in searching for the kernels. This agreeable and perfectly natural exercise gives warmth to the body, promotes digestion, and stimulates the secretions.

Inactivity is the bane of domestic fowls when restricted It predisposes them to listlessness, engenders vicious

habits and morbid desires, such as feather plucking, egg eating, etc. Hence, it is advisable to give your fowls all the exercise they will take. It stirs up the blood, keeps down internal fattening, and counteracts all tendencies to laziness, lousiness, and the consequent diseases which follow in their train.

These remarks are especially applicable to the larger breeds, as their quiet dispositions and gross size incline them to be inactive. Compel them to "be up and doing," and to *scratch* for their daily share of food, and you will find a marked difference in the looks, health and fertility of your fowls.

Winter, although considered a season of rest for domestic poultry, is manifestly detrimental to them in many ways. They are in a measure suddenly deprived of succulent green food, unctious morceaus of insects, the genial warmth of the sun, the freedom of range, the absence of calcerous matter, and other unconsidered trifles, which made up their summer bill of fare. Proper feeding and roomy quarters are indispensable to fowls at all seasons, but without plenty of exercise hens will not be healthy nor thrifty nor yield to the keeper a generous supply of eggs. If poulterers would exercise a little of their own judgment, and keep nature's ways constantly in view, they would find that every good laying hen is an inveterate scratcher, or active in some way or other and that by exercise their stocks would be vastly improved, confiding purchasers greatly benefited, and many millions of wealth annually added to the fowl interests of the country.

JUDGING.

We propose to show how the *Standard* should be applied to this breed, and shall begin with the A, B, C of the matter. The experts among our readers must remember that there are thousands of beginners who every year come upon the stage. We aim to instruct such, and to this end our artist has made a series of draw-

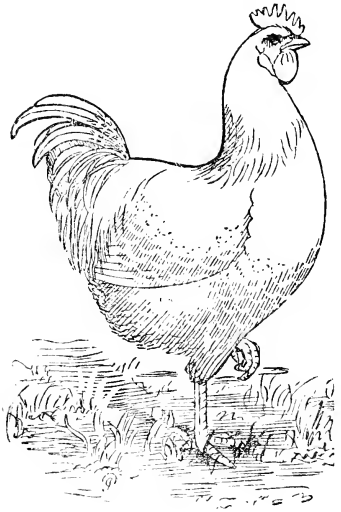

Fig. 1.

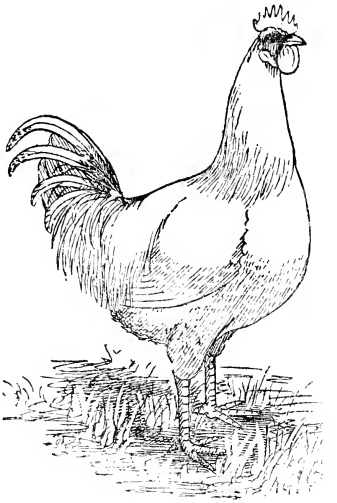

Fig. 2.

ings, illustrating the most glaring faults. We do not wish any of our readers to understand that such *extreme cases* of departure from the *Standard* as the cuts represent are *common* in the show room. Yet the failings illustrated are not absolutely *unknown* at exhibitions, since the originals of the drawings, with a few exceptions, were all found by our artist at shows, where they were sketched.

The novice should read this part of our treatise with a copy of the *Standard* before him, where he will find a numerical table, showing the 100 counts which are supposed to represent an *ideal* perfect bird. We doubt if a *real* perfect bird has yet been raised. The function of the judge is, therefore, to note how far each specimen falls below perfection. The pages of the *Standard* pre-

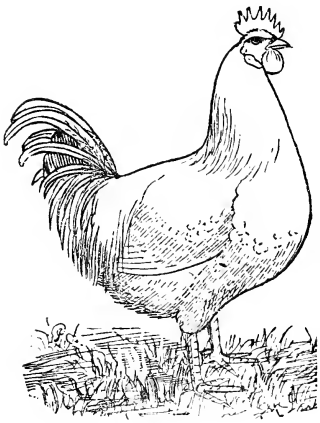

Fig. 3.

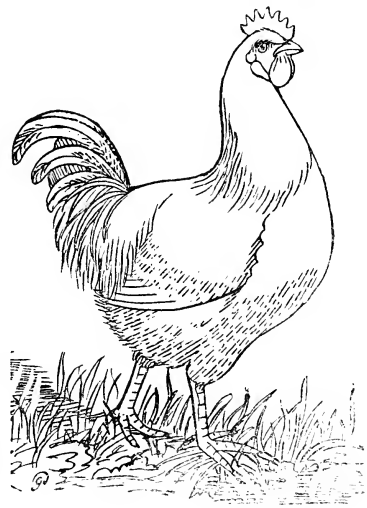

Fig. 4.

ceding the table explain each part of the fowl—as head, beak, neck, legs, etc., minutely. Let our novice look at the beginning of the table, and he will find that

SYMMETRY

is allowed 12 counts. But the 12 counts are for a *perfect* bird. If the judge finds that the particular bird he

is examining falls short of perfection in *symmetry*, he does not award it 12 counts, in making his report, but cuts it down to 11, or 10, or less, as the case may be. He proceeds in this way with *size and weight*, and so on through the table, and enters the whole number of counts the bird is entitled to upon his official report. The bird that gets the highest number of counts wins the first prize.

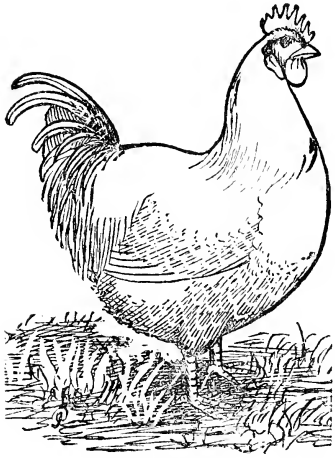

Fig. 5.

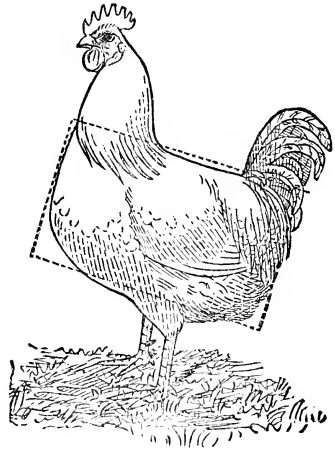

Fig. 6.

There are certain broad principles which the judge should keep in mind, in order to render justice. In cutting down for defects he should consider the proportion which the number of counts, or "*points*," he removes bears to the whole number of points under that head in the table. Thus, if "symmetry" in an imagined case is allowed 6 points in the table, and the judge cuts down

3 points, it takes away *one half*, and this is a heavy reduction: whereas, if symmetry is allowed 12 points in the table, in the case of some other breed, then a cut of 3 points is not so severe, relatively, because it takes away only *one quarter*. Again, the judge should not cut twice for the same fault. If the specimen has ill-shaped *wattles*, for instance, and the judge cuts him down under that head, he must not consider the shape of the wattles

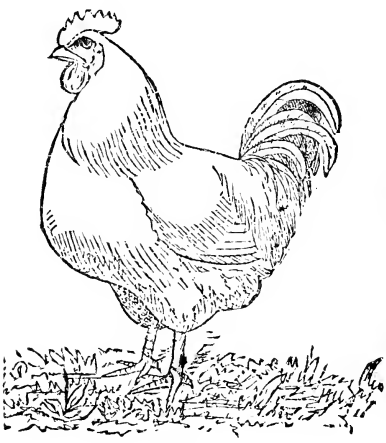

Fig. 7.

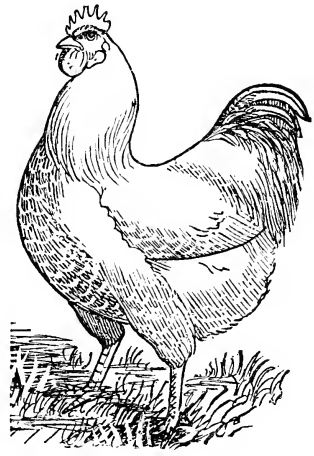

Fig. 8.

at all in cutting under the head of *symmetry*. Another thing should be observed in all judging: wherever several things are massed under one head (for example, "wattles and ear-lobes," in the Plymouth Rock table) the judge must fix the number of points the ideal *wattles* are entitled to, and the number due the ideal *ear-lobes*, otherwise he will be liable to do injustice in adjudging between competing specimens where sometimes good ear-lobes may

chance to accompany defective wattles, or *vice versa*. On this matter an experienced fancier writes as follows: "I like your idea of dividing, sub-dividing, and distributing the tabulated numerical part of the *Standard*. I always do this, mentally, in judging, but it should be discussed and explained in poultry literature until it is perfectly understood. It might seem like a work of supererogation to publish explanations of the proper methods of applying the *Standard* in judging, but it would be very useful." It is a pity that the sub-division was not made when the *Standard* was issued. However, each judge can subdivide for his own convenience in furthering justice.

We believe most judges pass upon symmetry and condition first. It certainly is best to decide upon these heads before the fowl has been ruffled or disturbed by handling. In considering symmetry of Plymouth Rocks, the judge should recognize that the breed has a *shape of its own*, and that in outline it should be neither Dominique, Cochin, Brahma, or Dorking. It should be *Plymouth Rock*. Our artist has aimed to show defects not excellences in the accompanying series of illustrations. We remark here that the cuts are not filled-in or shaded to show the markings of the feathers—*form*, not *color*, being under discussion just now. The Cochin shape is very frequently found. The lower part of the breast being deficient in the cock, gives an approximation to the Cochin form. Figs. 1 and 8 give variations of the Brahma outline; the first-mentioned also suggests the Cochin. Fig. 2 shows a specimen too leggy and long-necked. Sometimes the best birds are as elongated as

this when young, but "settle down" into good proportions after a while. Notwithstanding, a bird in this gawky stage should be cut severely in symmetry, or kept out of the show-room. Fig. 5 shows the other extreme, that is, legs too short, resembling those of the "Creeper" breed. Occasionally such a dumpy bird is found indicating overfattening. Our artist has also shown, in fig. 5, the defect called "hog back," the shape of the back being convex, instead of straight, or slightly concave. See fig. 8, for the other extreme, the hollow of the back being too deep.

What is meant by a shape excessively like the Dorking is shown by fig. 6, the outline approaching the parallelogram indicated by the dotted lines. In the opinion of leading fanciers there should be considerable of the Dorking shape—but as remarked above our artist intended to show defects mainly, not merits, and therefore has illustrated extreme cases. A slight approximation to the parallelogram or Dorking style is all right. Figs. 3 and 4 show a milder degree of the Dorking shape; the former illustrating a very long-bodied fowl. Fig. 7 is of the Dorking shape, needing only the fifth toe and long sickle feathers to be complete. Our readers may see from the cuts that *symmetry* means the general outline of the bird, not the form of any particular member.

We pass by

SIZE AND WEIGHT,

as the actual trial of the scales and the "*suggestions to Judges*" in the *Standard*, make that part of judging as simple as weighing tea.

CONDITION

refers to health, and cleanliness, and perfection of the plumage. Health is shown by the vivid color of comb and wattles, the bloom or gloss of the plumage, and the alertness and general "wide-awakeativeness." The bird should be cut under this head if either too fat or too lean. Cleanliness needs no comment, since though the intrinsic value of a fowl may not be altered by dirt, yet it offends the eye, and destroys the attractiveness of the specimen. If feathers are torn and battered, the fowl loses under *Condition*, but not under "Symmetry," or any other head.

HEAD.

This, in the Plymouth Rock *Standard*, does not mean comb, or ear-lobes, or wattles, since they are provided for elsewhere. It means beak, and the crown of the head, principally, or the arch at the base of the comb, which mostly determines the shape of ihe head. Figs. 2, 8, 9 and 15 show this arch too flattened, also, a too narrow space above the eye. Fig. 11 gives a much better arch at the crown of the head and a good height of skull above the eye. Fig. 17, is a head too long horizontally, from right to left, giving a very awkward appearance.

Passing, next, to

COMB,

we notice certain principal faults, namely: a lopped comb, by which we mean one that falls over entirely, like that of a Leghorn hen; a twisted comb, fig. 10, that is, one

with a wavy outline, causing the points to appear out of a straight line, when viewed from the front; side springs, or branches, fig. 14; a dishing comb, by which we mean one that has a hollow in the side, as shown in fig. 10, where the dark-shaded portion indicates the depression. Of course, in a dishing comb, the concavity is accompanied by a corresponding bulge on the opposite side. Then there is the shapeless comb, fig. 13, simply a heterogeneous lump. Irregularity, in a less degree, is shown in figs. 12 and 16. Other varieties are the very low

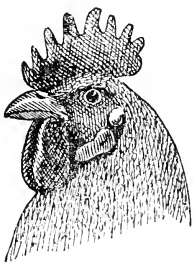

Fig. 9.

Fig. 10.

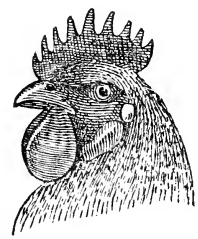

Fig. 11.

comb, fig. 15, and the opposite extreme. Crooked tips are frequently seen, figs. 9 and 17. The faults in the cuts were designedly represented in an excessive degree. In a mild form all the defects we have described are very common in the show-room, for a good comb is the hardest thing to any breed upon any variety. For a lopped, twisted, sprigged, dished, shapeless, low, tall, or crescent-pointed comb, the judge should cut down $\frac{1}{2}$, 1, 2, 3, or more, counts. Of course, if the defects are very glaring, the specimen may lose even more than this. If the bird unites several of these defects, and is cut a

point or two on each, he will justly lose half or two thirds of the full number, eight. Frequently a slight lop, and a slight twist, and slight side sprigs are combined. Many birds may therefore be justly cut from 3 to 5 on the comb.

We now come to

EAR-LOBES AND WATTLES,

the amount for which is 6. We will follow the custom of most judges, and consider that wattles should have 3,

Fig. 12.

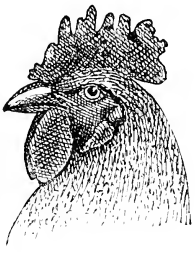

Fig. 13.

Fig. 14.

and ear-lobes 3, on our ideal bird. The *Standard* defines the color of wattles as bright red, yet we opine that, if *pale*, the cutting should be done under the head of Condition. The allotment of the 3 possible points on wattles will then depend on size and shape. There is the large, coarse variety, which accompanies a coarse bird, and an opposite defect consists in the other extreme. Fig. 17 shows the defect of wattles of unequal length. This is a not very rare failing, which we have noticed on several occasions the past season at exhibitions, yet as it is not mentioned in the description of the comb in the *Stand-*

ard, the cutting must be done under the head of *Symmetry*. We frequently find the long, pendant wattles, fig. 9, or the wavy or folded variety, fig. 10, and for these faults the cutting may also be done under the head of Symmetry, provided the wattles are made unlike—that is, unsymmetrical—by the defects mentioned. As the *Standard* specifies that the wattles must be well rounded, of course the pointed variety, fig. 16; the elongated sort, figs. 9 and 17; the narrow, fig. 12; and the irregular, fig. 10, will be cut from 1 to 3 points, while the egg-shaped wattles fig.

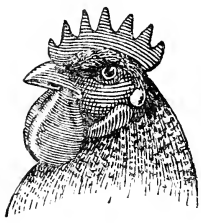

Fig. 15.

Fig. 16.

Fig. 17.

14, or the purse-shaped, fig. 15, will fare much better. The ear-lobes may be cut for color. At least two of the three ideal points may be cut for the fault of whiteness. If slightly spotted, or edged with white, cut half a point; if moderately bad, cut one point. For too large ear-lobes, or too small ones, cut one half to one point. Most breeders prefer ear-lobes that are free from wrinkles, as if laid on smoothly, like a wafer on a letter, and the edges neatly rounded, but no attention should be shown to this in judging, as the *Standard* says noth-

ing about it. The *Standard* must be followed if it kills the horse.

We proceed to describe some of the principal faults of

THE TAIL

in Plymouth Rocks. Fig. 18 represents a tail which is too short for a full-grown cock, though it would do very well upon a cockerel, in which case mature sickle-feathers would not be expected. Fig. 19 illustrates a tail with

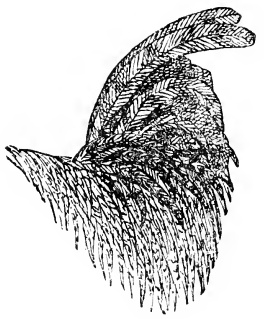

Fig. 18.

Fig. 19.

sickle-feathers too long. Sometimes still larger tails are found in the show-room, giving the birds too much of a Dominique appearance. As a shape approximating the Dorking, *i. e.*, with a rather long and square body, grows in favor, the longer tails to correspond will be in vogue. A very bad fault is a tail which is too upright (fig. 20); and a squirrel tail (fig. 21). where the tail stands from its roots toward the birds head, is a still worse fault.

It must be remembered that if the specimen is cut down on account of a squirrel tail, or an upright tail,

or any other objectionable form or position, the tail must not be especially considered in deciding upon symmetry since the bird must not be cut twice for the same fault. Symmetry is not to be understood as referring to any particular member, but as signifying the general balance of parts. To illustrate, a coat may look well enough if hanging in a wardrobe; but if made for a short man it will look out of proportion if worn upon a tall individual.

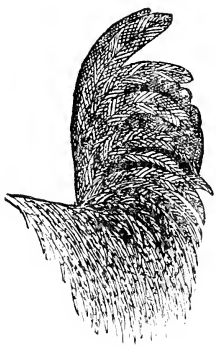

Fig. 20.

Fig. 21.

The *Standard* mentions a wry tail as a disqualification, and disputes as to what a *wry tail* really is frequently arise at shows. It is no uncommon thing for a bird to carry the tail awry a part of the time, as a sort of freak or habit. A tendency will be found with some specimens to shake the tail or move it sidewise, for no particular purpose except "for the fun of it," as quadrupeds move their tails. If a bird is noticed to carry the tail perfectly true a part of the time, and upon examination the flesh and bone forming the foundation of that

member is true, it is not a *wry tail.* A wry tail is generally accompanied by a wry back or crooked rump, which is noticeable after the fowl is plucked for cooking. Of course there can be no cutting for a wry tail. If it is decided to be a wry tail, the specimen must be thrown out of competition altogether.

The judge should separate the possible number of points (6) into two parts; one part to apply to the *color* of the tail and the remainder to the *form.* Probably three for color and three for form would be a fair division. Then for the various faults of form enumerated above, viz.: a too long, or too short, or upright, or squirel tail, cut from one half point to three points, according as the fault is slight or prominent.

EXTRA WEIGHT.

It is safe to predict that when the contest over the proper method of mating to produce birds that will be alike prize-winners, and suitable breeding birds is over the next point for discussion will be that of extra weight. Already protests against the tendency of breeders of every variety to push for extra weight have been heard. They have been few in number, so far, but unless we mistake not, they are but the straws which show that the tide has turned and will soon be running swiftly.

It may seem strange that fanciers should individually be constantly striving to add a few ounces to the weight of their best birds when a little reflection must show them that all they can gain above the natural weight of the bird is an accumulation of internal fat.

It is, indeed, almost as suicidal to stuff our best stock to repletion as was it to slaughter the goose of golden egg fame. Of what use are noble specimens as breeders, save to start a strain of prize-deserving birds, and how can they do this when the pressure of internal fat makes the cock too sluggish to properly perform his duties and the hens too oppressed to lay?

In this matter it is safe to follow the old saying "let well enough alone," no matter how great the temptation to get the best of rival exhibitors on this score. We are ready enough to admit that the chances are in favor of the man who enters the heaviest birds, and that on the strength of premiums won eggs may be sold at an extra price. But, make a note of this, Plymouth Rock breeders—*it does not pay.* Eggs from overfed stock are a poor investment for any one, and for the breeder who sends them out the worst possible. Send out eggs from stock which has been "crammed to win" and what happens: First comes complaint of a poor hatch and a request for a second sitting, you duplicate the first order and wait a report, which, when it comes reads somewhat as follows: "DEAR SIR:—The second sitting you sent me resulted in three chicks. So I have now seven chicks for my trouble in hatching out two clutches. I paid you a good price and expected something nice; or at least good eggs. Your stock *must* be pure and vigorous with a vengeance! Next time I send to you for stock I shall know it.

Yours, *very* respectfully, JOHN SMITH."

Now what, primarily, has brought about this result? Not infertile eggs; not bad packing; but simply a strife

for extra weight that brings forth *imperfectly vitalized* eggs. There is no royal road toward increased size In the best specimens of this breed, and when we endeavor to force nature's plans, though we may be apparently successful for a time, we but set going an agent that recoils on our own heads to certain damage.

When we get wise enough we shall know that the way to increase weight permanently is to select birds that weigh well when only moderately fat. Blood and bone and nerve and muscle carry the breeding power, and fat when present beyond a moderate quantity, is only an element of weakness. Besides, of what use is it to try so hard as many do to increase the weight of a breed? The average-sized specimen of any variety of our fowls is healthier, more active, productive and profitable than his over-sized brother.

POPULARITY.

It is a hard matter to decide which of the three most prominent breeds of the *Standard*, the Plymouth Rocks, Leghorns and Brahmas, can claim the greatest number of fanciers, but we may safely say that in this year of grace eighteen hundred and eighty, neither of the two latter has an appreciably larger or more thorough popularity than the Plymouth Rocks. Many a man has, to be sure, given up this breed, after a year or two of trial, because of the difficulty of breeding to nicety of plumage. But for every deserter of this sort there have been two who were attracted by the noble qualities of the fowl. To the genuine fancier the spice of uncertainty,

the probable possibilities (to coin a phrase), make the breeding of this variety a very entertaining study.

Apart from the attraction we have spoken of come still more solid arguments in the fertility and other good qualities of the breed, which appeal to the most positive test for ascertaining the value of any breed—the pocket of the breeder. Any breed that fails to pay its bills can meet but little permanent popularity; so, to invert the reasoning, we may feel sure that the popular breed is a paying breed. As surely as no system of ethics can live unless its rules gybe with common sense, so certainly can no type of fowls be perpetuated and held in high esteem unless its claims are founded on a common-sense, solid basis.

A FAIR AVERAGE.

The answer to the question, How many eggs will a hen lay? depends largely on the hen, the breed she is of, and a variety of other considerations too numerous to mention. It is almost like asking how many good-sized apples are in a bushel. In short, no definite answer can be given to such a hydra-headed query.

Ask a Cochin man, and he will say that the Cochins are the best layers, taking the year through. A Brahma man will say the same of his favorites, the Leghorn breeder of his fowls, and so on to the last fancier of the last variety.

Without going so far as a recent writer, who gives the Plymouth Rocks the palm as the most fecund of all breeds, we may justly claim a high average. Doubtless

in this, as in almost any fine breed, hens may be found that reach as high an egg record as two hundred yearly, but they are and must be exceptions to the rule. A fair average, one that the hens of a pure and well-kept flock may be relied upon to produce, is from one hundred and twenty to one hundred and fifty. No doubt by specially selecting the best layers and placing them under very favorable conditions, one hundred and seventy-five or one hundred and eighty might be made the figure. Yet this would be no real average, as it would represent not the average of the flock but of its best birds.

Breeders of limited experience are apt to expect too much in the way of egg production, and take little or no thought of the time necessary for incubation and moulting. All these necessary times of respite for the egg-producing organs must be fully summed up before we can get a true idea of the work we may expect.

It is worth while to remember that while in a state of wildness the progenitors of our Plymouth Rocks laid only as many eggs as were needed to keep the race alive. Since then, under the constant spur of man's tuition, they have increased the yearly work to ten times its original proportions, so that while it may not yet have reached its ultimate height, we are getting, in one hundred and thirty eggs a year, a very fair average.

WINTER LAYING

Though most fanciers begin to collect eggs for hatching in the latter part of January and the month of February, so that raising eggs for market hardly enters into

their calculations, fertility during the winter months is of prime importance. The demand of the buyer of mature stock is almost always for early hatched pullets. So thoroughly has the saw "early chickens early eggs, early eggs early chickens" become believed, that chicks from eggs laid in February and early March always command better prices than later and less perfectly developed ones. It is, then, a great point in favor of the Plymouth Rock that we can truly commend them to all breeders as first-class winter layers. Any breed will, of course, lay in winter if kept in the tropical climate of a green-house, but the Plymouth Rock hen needs no such special advantages to prove herself a good winter layer. With the ordinary conditions of house and runs which no poultryman would think of denying his stock, she fairly contests the place which the Asiatics have so long held in the popular mind.

Taking this matter of winter laying in its least profitable aspect—that of simply obtaining a sufficient supply of eggs for home use and marketing at the price of ordinary eggs, there is still a splendid exhibit in favor of the Plymouth Rock. Taking the average of all the eggs produced in a year, this breed may not surpass some of the non-sitting varieties, but for the *timely* production of eggs when eggs command a good price in the market they have few equals. To substantiate this assertion we might adduce hundreds of letters which have been sent us, but as they have mostly appeared in print in either the POULTRY WORLD or AMERICAN POULTRY YARD, we refer our readers to files of these papers, which are in

the hands of nearly all our fanciers. It may be worth while to remember that while all breeds of improved poultry are good layers, there is no equal ground which almost all reach and but few pass. There is as much difference as there is in blooded horses : all are fast but some much faster than others. The Plymouth Rock—to carry out the simile—is, in our opinion a member of the two-twenty class with many extra fine layers that make even a better record.

Give any birds kind and sensible care and adequate results will follow, but with the same advantages the Plymouth will make for itself a record that few breeds can equal and fewer still excel.

Directions for Using

Carbolated Insect Powder.

To kill lice on fowls and pigeons, or fleas on cats and dogs, dust the powder well inward to the skin, on every part of the animal. To apply it to a sitting hen, disturb her slightly when on the nest at night, causing her to bristle up her feathers, when the powder may be sprinkled over every part of her head, neck, sides and back; and, by scattering it all over the nest and eggs, it will be brought into contact with the hen's under parts, also. Treat a hen in the same way when she is brooding her chickens at night, and put some on the back of each chicken and over the whole of the floor of the coop. Grown fowls, or chickens that have left the hen, should be cooped up in close quarters over night, in a coop with a tight floor and no perches, and every part of each fowl, and the floor of the coop, should be treated as above described. In this way the powder has the whole of the night to accomplish its work in; whereas, if it is attempted to apply it to grown fowls, chicks, or sitting hens, by day, they run about and shake their feathers so much that most of the powder falls off before it has taken effect.

We sell a small Bellows, which we send by mail, prepaid, for 25 cts., which is exceedingly convenient in applying the powder to poultry, or other animals.

One of the chief uses of the CARBOLATED POWDER consists in its mixture in the dust-bath. In preparing a dusting-place for fowls, mix a 25 cent package of the powder with every bushel of road dust, or ashes, in the dust-box, and it will seldom be necessary to apply it directly to the fowls in the manner above described, as they will attend to that business of their own accord, while enjoying the dust-bath.

Scatter a few spoonfuls of the powder in the nests of the laying hens, as well as in those of the sitters, and distribute it freely over the floors of the coops for young chickens, and the houses for adult fowls.

PRICE of the CARBOLATED POWDER, 25 cts. per package. Large packages, containing more than double the quantity, 50 cts.

A liberal discount to the trade.

H. H. STODDARD, Manufacturer,

Hartford, Conn.

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